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Spring 2010

## CEG 770-01: Computer Engineering Mathematics

Jack Jean

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## CEG 770 Computer Engineering Mathematics

Spring 2010, 6:05-7:20 PM, Tue., Thr., at 406 RC

**Instructor:** Jack Jean

**Office Hours:** 3-4 PM & 5:30-6 PM, Tue., Thr.; 334 RC, 775-5106,  
jack.jean@wright.edu

### **References:**

- Probability, Random Variables, and Stochastic Processes, Athanasios Papoulis, McGraw-Hill, 1991.
- Queueing Systems, Volume I: Theory, L.Kleinrock, John Wiley & Sons, 1975.
- Linear Algebra and Its Applications, Gilbert Strang, Academic Press, 1980.
- Operations Research, Hamdy Taha, Prentice Hall, 2006.
- Operations Research, Second Edition, Richard Bronson and Govindasami Naadimuthu, Schaum's Outlines, McGraw-Hill, 1997.

### **Weekly Schedule:**

| Week | Contents                             |
|------|--------------------------------------|
| 1    | Queueing Theory and Fundamentals     |
| 2    | Poisson Process                      |
| 3    | Markov Chains                        |
| 4    | M/M/* Queues, Regression             |
| 5    | Least Squares; MIDTERM               |
| 6    | Least Squares, Optimization Overview |
| 7    | Linear Programming                   |
| 8    | Linear Programming                   |
| 9    | Non-Linear Optimization              |
| 10   | Non-Linear Optimization              |

**Grading:** Final letter grade: 90+ (A), 80+ (B), 70+ (C), 60+ (D), otherwise (F).

- HW - 30%
- Midterm - 35%; April 29, Thursday; closed book and notes.
- Final - 35%; June 10, Thursday, 8 PM- 10; Not comprehensive, closed book and notes.